



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/752,624

01/07/2004

Mukund Raghavachari

YOR920030201US1

5975

34663

7590

07/26/2006

MICHAEL J. BUCHENHORNER, ESQ  
HOLLAND & KNIGHT  
701 BRICKELL AVENUE  
MIAMI, FL 33131

EXAMINER

LIE, ANGELA M

ART UNIT

PAPER NUMBER

2163

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/752,624		RAGHAVACHARI, MUKUND	
	<b>Examiner</b>		<b>Art Unit</b>	
	Angela M. Lie		2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/7/2004</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites the limitation "a document" in line 9. There is insufficient antecedent basis for this limitation in the claim. The examiner is not certain if the document used in line is the same document previously used in the method. The applicant needs to clarify this dependency.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

Art Unit: 2163

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1, 3, 5, 6, 8-11, 12, 14, 16, 17, 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Lindblad et al (US Publication 2004/0073541).

As to claims 1, 11 and 21, Lindblad discloses an apparatus and a method for processing an electronic document, wherein the document comprises a tree structure comprising branches comprising a plurality of nodes (as shown in figure 1), the method comprising steps of:

- receiving a query comprising search criteria (Figure 11, step S500) and wherein the search criteria comprise a set of constraints that specify forward or backward relations between nodes (paragraphs 169, and 129, wherein the searching algorithm moves forward or backward based on the processing step, therefore there is an indication accompanying the query specifying forward or backward search, furthermore based on ID algorithm can move forward);
- receiving a context node in the document with respect to which the search criteria are applied (Figure 11, step S508);
- receiving at least a portion of the document (Figure 11, step S508);
- modifying the search criteria to introduce a constraint matching the context node into the set of constraints (paragraph 164, Xpath expressions);

- processing the document in a streaming manner and using the modified search criteria (paragraph 164, candidate set); and
- locating one or more nodes that satisfy the modified search criteria (Figure 11, step S514).

Note: the memory for storing the instructions and the processor are inherent for the computing machine, i.e. if instructions would not be stored on the machine could not perform any function, and if there would be no CPU, computer could not compute or process any task.

As to claims 3 and 14, Lindblad discloses the apparatus and the method wherein the document is an XML document (paragraph 41).

As to claims 5, 12 and 16, Lindblad indirectly discloses the apparatus and the method comprising modifying the search criteria such that constraints specifying a backward relation may be reformulated into forward constraints (Figure 11, since step S512 uses mostly backward search and steps S506 and S508 mostly use forward search, restarting the search would be equivalent with reformulating constraints in order to obtain a forward search).

As to claims 6 and 17, Lindblad discloses the apparatus and the method wherein the query comprises an Xpath expression (paragraph 41).

As to claims 8-10, 19 and 20, Lindblad discloses the method further comprising reordering the tree structure representing the document to be search such that the number of nodes traversed is minimized (paragraph 105, wherein the nodes returned are part of the document).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 4, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindblad et al (2004/0073541) in the view of Raboczi et al (US Publication 2003/0074352). Lindblad teaches all the limitations disclosed in claims 1 and 11 respectively, however he does not explicitly state that the document is stored in memory or that the document is streaming. Raboczi teaches database query system wherein the document can be stored on the memory device or can be stored in the file system of the database in which case the user to access document would have streaming document (paragraph 59). It would have been obvious to one of the ordinary skill in the art during the time the invention was made to store the document on the memory device or access it via internet (streaming), because in order to search document, there has to be constant access to the document at least during the duration of the search, in order to obtain one has to have the document stored or be able to access it via network.

9. Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindblad et al (2004/0073541) in the view of Trappen et al (US Publication 20050138064). Lindblad teaches the limitations in claims 1 and 11, however he does

Art Unit: 2163

not teach that query is represented by a modified directed acyclic graph comprising a node "Ctxt" which only matches the context node. Trappen teaches the system for manipulating database wherein the query is represented by DAG (directed acyclic graph), and wherein the query is matched with the searched document or file (paragraph 161). It would have been obvious to one of the ordinary skill in the art during the time the invention was made to DAG to represent the query because this allows for much faster search than the traditional text (serial) query.

### ***The Prior Art***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent 6442545 discloses term level text search comprising a tree structure.

### ***Inquiry***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela M. Lie whose telephone number is 571-272-8445. The examiner can normally be reached on M-F.


12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2163

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**Angela M Lie**



**DON WONG**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100